



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,714	03/02/2000	Jose R. Gonzalez-Martin	29131.2241	4355

7590 10/17/2003
Snell & Wilmer LLP
One Arizona Center
400 East Van Buren
Phoenix, AZ 85004-2202

EXAMINER

ELEY, TIMOTHY V

ART UNIT PAPER NUMBER

3724

DATE MAILED: 10/17/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/517,714

Applicant(s)

GONZALEZ-MARTIN ET AL.

Examiner

Timothy V Eley

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20 and 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 23-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following phrases in the claims are vague, indefinite, and/or awkwardly and confusingly worded and are therefore not fully understood:

- i. "transporting . . . robot"(claim 23, lines 4 and 5) and "transporting . . . location"(claim 23, lines 6 and 7). Applicant's preamble refers to transferring wafers between a plurality of stations of a machine. However, these phrases refer to transporting wafers from a first station or second station of the machine to "another location". It is not readily apparent from this recitation that another location is part of the machine.

- ii. "whereby use . . . handling"(claim 23, lines 8-12). In this phrase, "at a time that is replaced for each of the

Art Unit: 3724

transporting operations" is awkwardly worded. Also, in this phrase, "minimizes transfer of contaminants from wet wafers to dry wafers through the robotic handling" is vague and indefinite, since a step of transporting wet wafers was never previously recited, and "the robotic handling" lacks proper antecedent basis since it was not properly earlier referred to.

iii. "retrieving . . . robot"(claim 25, line 5). It is not readily apparent as to how the workpieces are retrieved from the third station without previously being placed at the third station.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 20, 30, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Bacchi et al.

a. Bacchi et al disclose a wafer handling system comprising a six axis robot having an operative end; a dry wafer gripping

Art Unit: 3724

device attached to the robot operative end and having a dry end-effector(30R); and a wet wafer gripping device attached to the robot operative end and having a wet end-effector(34L). Note, each of the end effectors can be used to grip both dry and wet wafers. See figures 1B,1A, and 3; column 2, lines 52-58, column 4, lines 65-67, and column 6, lines 26-44.

b. Regarding claim 31, the dry end-effector and the wet end-effector can be oriented substantially orthogonal to each other(see specifically figure 3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanbu et al in view of Bacchi et al.

a. Nanbu et al disclose a method for robotically transferring semiconductor wafers between a plurality of stations(11,12,21; see column 6, lines 32-51) of a machine for performing multiple operations on the wafers using a robot(14) for handling wafers, the method comprising: transporting wafers (inherently) having surface contaminants from a first station(11) of the machine to

Art Unit: 3724

another location(21) with the robot; and transporting "dry" wafers with the robot from a second station(21) of the machine to another location(12).

b. Nanbu et al does not disclose using a robot equipped with two end-effectors for handling wafers.

c. Bacchi et al disclose using a robot equipped with two end-effectors for effectively transporting wafers efficiently from virtually any location in an available work space(see column 2, lines 52-58.

d. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced the robot(14) with a robot equipped with two end-effectors for effectively transporting the wafers more efficiently as taught by Bacchi et al. Minimizing transfer of contaminants from wet wafers to dry wafers through the robotic handling will inherently be met by the combination of Nanbu et al in view of Bacchi et al(note, applicant has not recited transferring wet wafers).

e. Regarding claim 24, transporting from a first station to another location inherently comprises "flipping"(as broadly recited) the wafer, since "flip" is defined by Merrian-Webster Online Dictionary as; b : to move with a small quick motion (which the robot inherently performs).

Art Unit: 3724

Allowable Subject Matter

7. Claims 25-29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

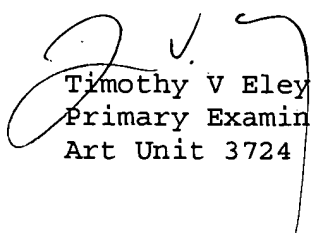
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. The prior art discloses robots having two end-effectors.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V Eley whose telephone number is 703-308-1824. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N Shoap can be reached on 703-308-1082. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.


Timothy V Eley
Primary Examiner
Art Unit 3724

tve